

WATER BUILDS

A Singing Species

By: Ana María Durán Calisto

Indulge me, dear reader, if I discuss design in Upper Amazonia with a hybrid voice, poetic and prosaic or technical. Discussing Amazonian design from an exclusively rationalist and/or technocratic perspective, would do a disservice to the sophisticated aesthetes of the region's many nations. The clues to the future of Amazonia are in Amazonia.

Prelude 1

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The Waorani do not want the Taromenani necklaces to be published.
Their choice to isolate shall be respected.

In her book, *Huaorani Transformations in Twenty-First-Century Ecuador: Treks into the Future of Time*, the anthropologist Laura Rival published an image that struck a deep chord in me. It portrayed a Waorani Taromenani necklace. The multiple serpents of its beaded circumference threaded several stories around the neck of isolation. Each bead spoke of a hand reaching out, a trek, a penetrating sight, a forest. In each circular pathway one could trace her hands inserting beads of alternating colors. Snakes coiling their life into culture, with beautiful round scales, polished like the nails of her fingers. The pathways around her neck summed the trails that her feet had tread; trails marked by generations of ancestors whose legacy can be inferred in the nuances of a cultural territory grown from the soils of a deep human history, invisible to the Western eye.

What is her name? I wonder. Who is she? What would she say if I could talk to her? This artist-gatherer who threads shells, claws, bone, teeth, and beads made from the rubber skin of electric wires with rattles of plastic and metal bottle caps, belongs to a group –the Waorani Taromenani– who collectively chose to live in “voluntary isolation” after having encountered troops of workers, the oil industry, and the environmental wreck they left behind in northern Ecuadorian

Amazonia. I don't know what Lefebvre exactly envisioned when he threaded the beads of the words "planetary" and "urbanization" together in the mid-20th Century. Was he prefiguring this necklace? The impossibility of isolation? The penetration of our garbage into the confines of every single river, territory, body, eye, and mind? What does she think when, in her ecology of impossible isolation, she picks the new species of plastic or metal bottle cap, or the electric wires, between thumb and index? Through art she weaves herself and her people into the planetary and inescapable social fabric of global capitalism.

Prelude 2



Waorani chambira curtain. Photograph by Bicubik (Sebastián Crespo).

"Like birds weave different nests, I wish to weave and be free as they are."
Omeña H.

Through my friend and colleague Fernando Huambutzereque, a Shuar architect, I was recently in contact with Waorani women artists from the Teparare and Tiguino communities (there are 53 Waorani communities in total). They have a Ñänönani (weaving) Store where they sell their crafts in a small oil boom town called Shell-Mera, in the province of Pastaza. They weave colorful hammocks, ear rings, necklaces, bracelets, baskets, bags, mats, and other items with palm fibers and *chambira* (*astrocaryum chambira*), a strong natural fiber from Upper Amazonia which they collect in two to three hour walks in the forest. Sixty Waorani women have come together to create the brand *Ömere: Textures of the Jungle*, under the leadership of Romelia Papue, a Kichwa, and Manuela Ima, former president of the Association of Waorani Women. Ömere means forest in Wao Terero, the mother trunk of Waorani linguistic branches. Ömere is much more than a community-based enterprise. Waorani women make crafts as part of their

daily, communal, and ritual life. They weave ancestral knowledge and techniques into new generations. They innovate as they experiment with natural pigments from nuts, bark, fibers, fruits, seeds, leaves, tubers; and develop hybrids, combining *chambira* and other palm fabrics with gourds, wood, seeds, feathers, and other forest elements into a series of objects. Grandmothers, mothers, and children actively participate in the rituals of creative making. Waorani women sing as they weave.

When he visited the Ñänōnani Store, some days before Christmas, Fernando spontaneously shared with me images of colorful and finely woven Waorani crafts that were available for sale. I responded by asking whether Ömere had a catalogue that I could use to promote their crafts, stimulate their household economies, and order some beautiful items myself (Who does not want to support women-led, community-based enterprises?). Great was my surprise when, after pressing the sunrise pointing arrow in my phone, a song in Waorani emerged as a reply. Like the photograph of the Taromenani necklace, the Waorani song touched a deep cord. I could not understand the rational meaning of the words, but I could feel the song, and its river welled up into the swamps of my eyes. Compassionate, she explained in Spanish, when the song subsided: Why am I singing? I am singing a forest wind who cannot see you, but can see the blue. A morning dawn. A beautiful day. A forest flowering many animals. Healthy water. A fruit. A bird who visits me early in the morning looking for its favorite fruit. As this bird is, so we are.

Many anthropologists have noted that for multiple Amazonian groups human beings are a singing species; above all, a singing species.

Prelude 3



Figure 3: Portrait of María Clara Sharupi Juá by artist Fabiano Kueva

Sitting in a coffee shop in Puyo, Yumi Wampankit, who acts as coordinator of NAE (*Nación Achuar del Ecuador*/Achuar Nation of Ecuador), tells me that Shuar women have songs for everything: for their *ajas* (garden polycultures), their plants and animals; for the men they love; for their children; for day and night; for Arutam, Nunkui, and other Gods; for the river, the skies, the forests.

María Clara Sharupi Juá, a Shuar poet who lives in Quito, wants to build a *Casa del Poder de la Palabra Shuar* (The House of Shuar Word's Power). "Words are powerful," her blue voice speaks. "Like women, they conceive. Words grow in the womb of the mind. They give birth to the visions they sing. Wombs are also the houses we weave to live in. As we weave geometries into baskets, we weave them into our houses, and into the lines that pattern our skin against enemies." The geometric patterns woven, painted, inscribed by Shuar women, Yumi once told me, are songs.

A Walking Navigating Species

*Las arenas de los Andes, el río de los glaciares –las hojas, los ojos, de la selva.
¿Cuántos organismos nos miran?
¿Cuántos nos sostienen?*

The sands of the Andes, the rivers of the glaciers –the leaves, the eyes, of the forest.
How many organisms are watching us?
How many sustain us?

*Cruzan, incesantes, los camiones y las volquetas sobre el puente que une
al Coca con Dayuma (vía Auca) (vía Tigüino).
Hay motos frescas, bicicletas inquietas con la lengua afuera, rotaciones automáticas
-como las revoluciones del sol:
inconscientes– regresan, de giro en giro,
trazando cordones negativos,
rugosos,
sobre el fango.*

They cross, incessant, trucks and dump trucks along the bridge which connects
Coca with Dayuma (Auca road) (Tigüino road).
There are fresh motorcycles, restless bikes with drooling tongues, automatic rotations
like the revolutions of the sun:
unconscious– they return, from turn to turn,
imprinting the negative of multiple,
rugged ropes,
on the mud.

*Cruza gente sobre el puente. Van familias, regresan parejas, silban los motores,
van y vienen carretas (rickshaws), volquetas de piedras y polvos,*

*inmensos anuncios móviles de la construcción que se implanta del otro lado.
Se abre paso el mineral
entre las hierbas monumentales de la selva.*

People cross over the bridge. Families go, couples return, motors whistle,
rickshaws come and go, alongside dump trucks laden with stones and dust;
large, moving bill boards of construction works
calcifying on the other side of the river.
The mineral opening its way amidst
the forest's monumental grasses.

*El Amazonas es una ecología monumental.
Habría que estudiar los principios de la planificación y diseño amazónico;
detenerse en las tipologías del verde, para regresar, sentarse frente al río,
o de canto a su corriente, mirar los sedimentos arrastrarse testarudos desde el panorama de un
océano hasta los hondos fangos de otro... preguntarse por las construcciones sinuosas del barro,
los meandros irreverentes del agua, que asestan y re-escriben la acuarela imborrable de su
geografía, como serpientes de caligrafías inestables e inquietas.*

Amazonia is a monumental ecology.
One would have to study the principles of indigenous planning and design,
ponder the typologies of green,
before returning to contemplate the river, upfront,
or gently sitting by its side, to observe the stubborn sediments crawling by,
from the panorama of one ocean to the deep clays of another...
to wonder about the sinuous constructions of the muds,
the irreverent meanderings of the water,
striking and re-writing the indelible watercolor of its geography,
like serpents of unstable and restless calligraphies.

*Continúan silbando, en soplido lento, los camiones: de un lado al otro,
cruzan ambi-direccionales la cerbatana del puente: se disparan hacia conquistas remotas;
remuerden los árboles, le clavan los dientes de sus orugas gigantes a la yugular del Napo.
Y me pregunto: ¿Es esta una invasión? ¿Es una guerra? O es simplemente un flujo,
una interacción, un conflicto más en el corazón de la acción y la catarsis. Energía. Fuego.
Roja propulsión en medio de los ruidos, los temores y las sierras. Los motores fuera de borda.
Rojo el centro palpitante, pululante, de mi pecho. El mico detrás,
saltando entre las ramas de unos árboles.*

The trucks continue to whistle, in slow hisses: from one side to the other,
they cross the blowgun of the bridge in both directions: they shoot towards remote conquests;
they crunch the trees, they sink the teeth of their giant caterpillars into the jugular of the Napo.
And I wonder: Is this an invasion? A war? Or simply a flow, an interaction (an exchange?),
one more conflict at the heart of action and catharsis. Energy. Fire.
Red propulsion in the midst of rattle, tremors and chain saws. Outboard motors.
Red, the throbbing, swarming center of my chest. The monkey behind,

jumping between the branches of some trees.

*Y siguen cruzando los camiones, naranjas, rojos, blancos, amarillos...buses Baños, Trans., Cía.,
dos ruedas, dos hombres. La palanca de las volquetas ansiosa por verter su carga,
desparramar su peso sobre el fundamento de la tierra.
Bajo las losas que se vuelcan hacia el río, el desembarcadero donde atracan deslizadores,
canoas y barcos largos como los ríos que surcan, barcos troncosos...
como desolladuras de selva: vaciadas de savia,
su vaina se llena de semillas nerviosas con colores de advertencia.
Se desgranán las cajas de alimentos; se desparraman los chalecos salvavidas,
las camisetas azules, blancas, negras, amarillas, los pantalones rosados.
La comida viene de tan lejos.
La gente viene de tan lejos
-de tan cerca.
Nunca se fueron.
Se van.
Ellos llegan. Vienen. Se vuelven a ir.
Se quedan.
Y el río hace otro tanto, mientras crece el moho para cubrir por completo el muro que intenta
fijar su curso, volviéndose cost(r)a.*

And the trucks continue to cross, orange, red, white, yellow... Buses, *Baños*, Trans., Co.,
two wheels, two men. The levers of dump trucks eager to deliver their load,
ditch their weight upon the foundation of the earth.
Beneath the slabs that frame the river, a wharf where sliders, canoes
and long boats like the rivers they traverse, trunkish-boats, dock... like jungle peels:
emptied of sap, their pod full of nervous seeds with warning colors.
Food boxes are shelled; life jackets, blue, white, black, yellow shirts, pink pants are scattered.
The food comes from afar.
People come from afar
from nearby.
They never left.
They leave.
They arrive. They return. They depart.
They remain.
And the river does the same,
while mold grows to completely cover the wall that tries to fix its course,
becoming *cost(r)a* (scab and coast).

*La luz se derrumba en el telar de la noche que amanece.
Cuarenta días de atardeceres selváticos nos esperan. El primero me llena de goce.*

*Me quedaría en este enredo, pero avanzo fuera de sus ovillos musgosos por el hilo grueso,
lanudo, del río, que se desploma en taludes acuáticos desde los Andes.*

Los movimientos de tierra son incalculables:

cordilleras se deleznan en ríos;

selva que se deshoja en polvos de mar.

*El Amazonas es el río monumental de los Andes monumentales:
su negativo y complemento, se bifurcan los macizos de glaciares en un delta mayúsculo,
la boca atónita del silencio ventoso en las alturas, un grito apagado,
bajo el agua en el Atlántico.*

The light collapses through the loom of the night that dawns.

Forty days of jungle sunsets await us. The first fills me with joy.

I would remain in this mess, but I advance out of its mossy tangles through the thick,
woolly thread of the river, which plummets along aquatic ridges from the Andes.

The earth movements are incalculable:

mountain ranges melt into rivers;

jungles decompose into sea dust.

The Amazon is the monumental river of the monumental Andes:

its negative and complement,

the massifs of glaciers bifurcate into a colossal delta,

the astonished mouth of the gelid and windy silence of the heights,

a muffled scream, underwater in the Atlantic.

The Voice of the River

*Los objetos de la cultura que emergen de la natura del río son lineales. Y los objetos que surgen
de la maraña de la selva son reticulares, tejidos en suspensión, telarañas arte-facturadas.*

The objects of culture that emerge from the nature of the river are linear. And the objects that
emerge from the jumble of the jungle are reticular, fabrics in suspension, artful cobwebs.

*Se reemplazan las topas de las casas flotantes cada año porque la balsa absorbe agua y pierde
flotabilidad. Se las amarra o se las fija en la base de las casas, en este caso, la mera fricción las
mantiene en su sitio. Las hojas de una palmera (pui, irapai) se utilizan en la techumbre.*

Houseboat balsa woods are replaced every year because the raft absorbs water and loses
buoyancy. They are tied or fixed to the base of the houses, in this case, mere friction keeps them
in place. The leaves of a palm tree (pui, irapai) are used on the roof.

Los camiones adquieren cualidad de piragua...

Las formas de las naves y las formas de la arquitectura.

The trucks acquire the quality of a pirogue...

The forms of the ships and the forms of architecture.

In this boat, I am horizon.

Cada paisaje es una forma de pensar.
Every landscape is a way of thinking.

Islotes que son como montículos flotantes: nidos de paja se enredan en el telar de la corriente.
Islets are like floating mounds: nests of straw get entangled in the loom of the current.

Los troncos emergen desde el fondo de las aguas como fósiles de otro mar.
The trunks emerge from the bottom of the waters like fossils from another sea.

El río acaricia las raíces de los árboles.
La línea del agua es una guillotina inmisericorde.
The river caresses the roots of the trees.
The water line is a merciless guillotine.

Lógicas horizontales en un ecosistema seccional.
Horizontal logics in a sectional ecosystem.

I feel minute and flat in the Amazon, piercing through the waters, an awakening that lasts but a second before one drowns into sub-riparian universes. Dark. Darkness of suspended matter.
Constellation of wet dusts that Pollock the page upon which I write.

Los horizontes se multiplican, las líneas asfixian la perspectiva. Curva apenas el confín.
Infinito confinado, este río.
No hay lógica ajena que le valga aplicación alguna. Y una barcaza rasga el límite, estableciendo otro plano, otro horizonte, otra ruptura.
The horizons multiply, the lines suffocate the perspective. The edge barely curves.
Confined infinity, this river.
No foreign logic is worth applying here. A barge tears the limit,
establishing another plane,
another horizon,
another rupture.

Las olas quietas de este mar cautivo van a rebalsar suaves sobre las costas fluctuantes.
The calm waves of this captive sea softly overflow the fluctuating coasts.

La erosión continental de un río sin magnitudes, ubicado fuera del metro, irreverente y calmo.
Someter este paisaje a la medida es destruirlo.
The continental erosion of a river without magnitudes, located outside the meter, irreverent and calm. To subject this landscape to measure is to destroy it.

The Voice of the Forest

Los árboles todos se van de fiesta, emperifollados con collares y aretes barbudos, pulseras que se enroscan en sus millares de brazos, bufandas frondosas de plumas, velos de líquenes y lianas; otros se van de troncos desnudos, despliegan la esbeltez de sus cuerpos tensos...

The trees are all going out to a ball, dolled up with bearded necklaces and earrings, bracelets twisted around their myriad arms, leafy feather scarves, lichen veils and dangling lianas; some chose to join with naked trunks, displaying the slenderness of their tense bodies...

Raíces acróbatas de estructuras tubulares con centros de gravedad voladores –circo inverosímil de monstruos retorcidos, magnitudes malabaristas de lianas anti-gravitacionales y payasos oscuros que perforan túneles hacia el infierno.

Acrobatic roots of tubular structures with flying centers of gravity –implausible circus of twisted monsters, juggling magnitudes of anti-gravitational lianas, dark clowns perforating tunnels towards inferno.

Las flamas controladas de la infraestructura petrolera. El infierno contenido del rojo domado en el verde –es el infierno del enredo verde. La carretera corre paralela al río. Antorchas de hojas rojas en la competencia vertical del verde.

The controlled flames of the oil infrastructure. The contained hell of the red tamed in the green – it is the hell of the green entanglement. The road runs parallel to the river. Red leaf torches in the vertical competition of the green.

Árboles líquidos, los dedos del Amazonas, se abren paso sus vertientes entre las vertientes verdes de los árboles ambiciosos que aspiran al cielo: torre de babel con miras a alcanzar la luz, habla lenguas múltiples en su discernir ruidoso de pobladores invisibles, acechantes en su pulular oscuro.

Liquid trees, the fingers of the Amazon.
Its streams open their way through the green streams of the trees. Greedy, they aim to the sky:
Tower of Babel desirous of light
speaks the multiple languages
of invisible dwellers
lurking in its dark pulse.

La lluvia picotea el Yasuní, cicatrizándolo con golpetazos laterales. Puntitos que se encienden en la valla horizontal del río, plantas que se sientan sobre plantas, en los salones rococó de la selva.

The rain pecks at the Yasuní, scarring it with lateral blows. Dots light up upon the horizontal fence of the river, plants sitting on the laps of plants, in the rococo parlors of the jungle.

Sed de luz. La selva entera abre sus bocas a los delgados chorros de sol.
Thirst for light The entire jungle opens its mouths to the thin streams of sun.

*Mi hamaca huele a orines. Sus tendones de lana sostienen los músculos que se riegan y adquiere
forma en su arco invertido.*

*Habito una (con)catenaria: lecho clave en la lógica de los bosques, donde todo cuelga, se clava,
se precipita... Unos tentáculos se agarran de otros, vacían (varían) los grosores, se retuercen los
barroquismos de la exuberancia vegetal, se insuflan las espumas de los interiores de boas y
truncos.*

My hammock smells of urine. Its tendons of wool support muscles that spill onto the supple
container of its inverted arch. I inhabit a (con)catenary: a key bed in the logic of forests, where
everything hangs, dives, rushes down... Some tentacles cling to others, emptying (varying)
thicknesses, twisting the baroque exuberance of vegetation, breathing foams into boas and logs.

Los niños: diminutos ramilletes entre las palmas y los ceibos gigantes.
The children: tiny bouquets between palms and giant *ceibos*.

*Los pueblos señalan su presencia en medio de la oscuridad de la selva encendiendo sus
proyectiles de luz blanca–negra. Linternas que marcan, como cirios gigantes, soplados por las
manos, la vigilia de quienes esperan el milagroso arribo del “Cabo Pantoja”. No importa la
hora. En otro territorio sería el fuego. En otra época, la levedad de la canoa. Ahora las antenas
puntean por aquí y por allá, añadiendo con sus cerchas verticales, una especie metálica a la
selva. En *Tempestad*, el pueblo donde paramos, un megáfono se levantaba sobre la totalidad,
para abrir el cono de voz del Alcalde.*

The towns signal their presence in the pitch-black jungle
by intermittently igniting the cones of their projectiles: black-white light. Lanterns that mark,
like giant candles, blown by hands, the vigil of those who await the miraculous arrival of "Cabo
Pantoja". The hour of night is irrelevant. In another territory, smoke would be the signal. In
another epoch, the approach of the canoe. Currently, antennas dot the morning sky, their vertical
trusses adding a metallic species to the jungle. In *Tempestad*, the town where we docked, a
megaphone rises above the totality, to open the Mayor's voice cone.

Vaivenes pendulares de hamaca, de vientos furiosos...
Pendulum swings of my hammock, furious winds...

Obra de arte: lienzo tejido...
Urdimbres, hilillos longitudinales, transversales, en colores.
Artwork: woven canvas...
Colorful threads in warps and wefts.

Patrones derivados de la naturaleza. Partituras musicales con fibras naturales.
Patterns derived from nature. Musical scores dancing to the rhythms of natural fibers.

La escritura es un acto vegetal: el papiro, la corteza, el hongo... la selva es texto totalizante.
Writing is a vegetation act: papyrus, bark, fungus... the jungle is a totalizing text.

Este mundo específico está cargado de agua, pero no sabe a mar. Su aire no es salino, ni sus peces, ni sus delfines. Aquí todo es hoja en descomposición, barro, tierra líquida, olor a cueva y vertiente subterránea, lavado suave de embadurnamientos, vegetal que se ha hecho mineral, para tragarse a sí mismo y proveerse una capa de sustento, larga y delgada, como la cáscara arenosa sobre el cuesco, el cuesco sobre el fuego...

This specific world is loaded with water but does not taste of sea. Its air is not saline, nor its fish, nor its dolphins. Everything here is decomposing leaf, mud, liquid earth, the smell of a cave, an underground spring, a soft wash of smears, a vegetable that has become mineral, to swallow itself a layer of sustenance, long and thin, like the sandy peel on the platter, the platter on the fire...

The Voice of Light

Las redes del agua se reflejan nítidas en el atardecer de los botes. Todo en el Amazonas parece reflejarse: el cielo en el río; el río en los flancos de los botes; los botes en los árboles que caen rendidos, verticales, hacia el fondo de las aguas: hondos en la película de la superficie. Pilotes multitudinarios sostienen la mega arquitectura de un ecosistema que es tan perfecto, que raya en lo cursi. Los foráneos lo creerían una ficción imposible: los atardeceres que no se repiten y pintan de grotescos rosados cielos improbables; los arco iris de saltos elípticos, dos a la vez.

Ceibos monárquicos.

Nos adentramos en el río Yasuní, la zona de amortiguamiento muestra parches rasurados. Una cabeza peluda se hace rala, la calvicie amazónica –envejecimiento prematuro de un cráneo que pulsa con vida, con el encanto de la juventud ancestral (su esencia es la renovación continua).

The nets of the water are clearly reflected in the sunset of the boats. Everything in the Amazon seems to be reflected: the sky in the river; the river on the flanks of the boats; the boats in the trees that plunge, surrendered, vertical, into the bottom of the waters: deep into the film of the surface.

Multitudinous piloti support the mega architecture of an ecosystem so perfect that it borders on the corny.

Most foreigners would deem it an impossible fiction: the unrepeatable twilights that paint with grotesque pinks an improbable sky; the Olympic rainbows somersaulting, two at a time.

Monarchic ceibos.

We enter the Yasuni river.

The buffer area of the Intangible Zone shows patches shaved by oil extraction.

A hairy head becomes sparse, Amazonian baldness— premature aging of a skull that pulses with life, with the charm of ancestral youth (its essence is continuous renewal).

*Los cerdos chillan en berrinche colectivo
-el barco se convierte por un instante en el eco de un matadero flotante.
El mercado de la selva es una estructura cruda: el peregrinaje zigzagante del barco trisca
meandros, se choca contra márgenes oscuras, atraca en puntos insospechados, llamado por
señales de luz nocturnas: suben cerdos, se apilan los plátanos, se abre campo para las vacas y
los toros...*

Pigs howl in collective tantrum –the ship, for a moment, turns into the echo of a floating
slaughterhouse.

The jungle market is a crude structure: the ship's zigzagging pilgrimage leaps between meanders,
crashing against dark margins, docking at unexpected points, called by night light signals: pigs
climb, bananas pile up, a crack is opened to fit another cow or a bull...

*El viaje a Cabo Pantoja en la mañana fue de un misticismo surrealista. La garúa se levantaba
quieta. Poblaba río y bosque de atavismos vaporosos. Las hojas filtraban con sus millares de
púas huesudas la luz; se asían como alfileres de mantos duros a la densidad de la atmósfera...
nos acariciaron sus cascadas de arenas luminosas. Nos precipitaron sus cedazos boscosos.
Miro la quilla rasgando los velos de la niebla, revelando lentamente el agua:
el reflejo sobre el río lo puebla de amazonas.*

The trip to Cabo Pantoja in the morning was one of surreal mysticism. The drizzle quietly rose.
It populated river and forest with vaporous atavisms. The leaves filtered the light through their
myriad bony spikes; like rough mantle pins, they clung to the density of the atmosphere...
their waterfalls of luminous sand caressed us.
We precipitated through their bosky sieves.
I look at the keel tearing the veils of mist,
slowly revealing the surface of the water:
the reflection on the river populates it with Amazons.

The reflections, needle mirrors of the Amazon.
Brittle eyes, scintillating timeless movement.

*Las nubes lodosas del río nadan y se enroscan en sus turbulencias. Hacen malabares sutiles de
luz: pequeños huracanes del orificio, de los hoyos en las mejillas del río cuando sonríe, gustoso,
coqueto, anudando su piel morena.*

The muddy clouds of the river swim and coil in its turbulence. They juggle subtle light: small
hurricanes from the orifice, from the holes in the cheeks of the river when it smiles, gladly,
coquettishly, knotting its brown skin.

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The trip to Cabo Pantoja in the morning was one of surreal mysticism. The garúa got up quietly.
It populated river and forest of vaporous atavisms. The leaves filtered the light with their
thousands of bony spikes; they clung to the density of the atmosphere like hard mantle pins...
their waterfalls of luminous sand caressed us. Their wooded sieves rushed at us.
I look at the keel tearing the veils of mist, slowly revealing the water:
the reflection on the river populates it with Amazons.

En la Amazonia puede clavarse uno en el cosmos antigravitacional del agua.
In the Amazon, one can plunge into the antigravitational cosmos of water.

Planicie acuática de nubes narcisistas.
Se posan gigantes, ominosas, sobre el firmamento del río.
Se remojan enteras y se rascan sus panzas burbujeantes sobre las copas de los árboles
invertidos, en este mundo de espejos y espejismos, crecido hacia adentro, con las raíces patas
arriba. La selva entera se clava en las aguas luminosas, palillos finos multiplicándose,
en un juego de líneas, en halos de pelámenes fogosos.

Pantano continental.
Aquatic plain of narcissistic clouds.
Giants, they perch, ominous, on the firmament of the river.
They soak themselves whole and scratch their bubbling bellies on the branches of inverted trees;
in this world of mirrors and mirages, grown inwards, roots upside down. The entire jungle
plunges into the luminous waters, thin sticks multiplying,
in a game of lines, in halos of blazing fur.
Continental swamp.

La piromanía del cielo se condensa en un vórtice rojo: caldera celestial, absorbe su voz redonda
el cráter de nubes, apretado, vertical.
Lenguas de fuego se escapan sobre la noche plata que devora las sombras.
Lenguas de fuego escapan a los rayos para llenar de crepúsculo el río.
Ahora está pincelado de escamas, de fríos, de inviernos remotos que aquí no son más que
superficie.

The pyromania of the sky condenses into a red vortex: celestial boiler,
its round voice
absorbed by the tight, gravitational crater of clouds.
Tongues of fire escape over the silver night that devours the shadows.
Tongues of fire escape the lightning to fill the river with twilight.
Now, brush stroked with scales, with chills, with remote winters that
here
are nothing but surface.

An Artful Species

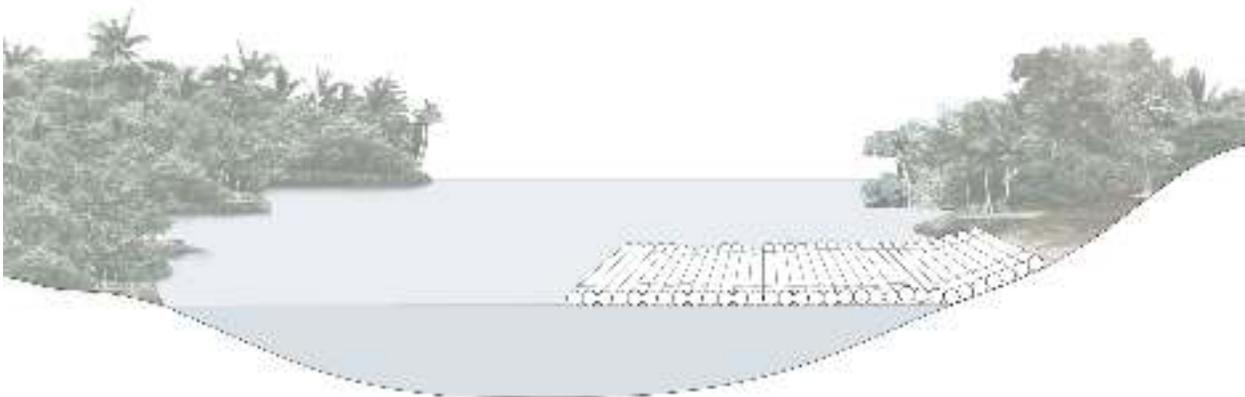
Within the framework of the poetic, Amazonian design can be discussed holistically. What I found most striking about it, as I descended the Napo and Amazon rivers with dear friends more than a decade ago, was the fluidity of the dialogue it established with its surrounding ecological intelligence, of which it became an inextricable fiber. There is no word for Nature as a separate, abstract, detached entity in most –if not all–Amazonian languages. In the forest, the social fabric is not exclusively human, nor exclusively embodied: it encompasses all animated beings, soil, water, and light among them; it includes all intangible agencies, manifestations or “spirits,” as I will call them for lack of a better term. Amazonians have been sharing their vast knowledge with foreigners since one of the tributaries of the Arawak, the Taíno, met the caravels of Columbus in the Caribbean. Diego Álvarez Chanca accompanied Columbus in his second voyage, assigned by the Catholic monarchs (under his request) to serve as doctor of the expedition and a trustworthy spy who could objectively report on the findings. Dr. Chanca was the first ethnographer and the first naturalist of the Americas. His writings already contain the seed for two myths that have shrouded our original nations: the myth of the “natural man” or Noble Savage (Rousseau must have read Dr. Chanca’s letter on the Second Voyage with Columbus) and the myth of the Brutal Savage, the bestial Cannibal and human sacrificer, whose behavior would later be used to justify and legitimize the brutality of the Conquest and colonization of the Americas. What is most important to this brief reflection on design –not humanity’s inscrutable capacity for violence– is that Dr. Chanca was the first European to capture indigenous science through his detailed descriptions of medicinal and other plants. He was the first of several great disciples of indigenous knowledge. Two others are most salient: La Condamine and Humboldt. The word ecology would be coined, paradoxically, by a eugenicist disciple of the latter: Ernst Haeckel, whose magnificent drawings and synthesis of the study of the relationships between organisms and between them and their environment would place the Native American integral –far from mechanistic– understanding of “Nature,” at the center of Western culture for the first time in its history.

As a disciple of Amazonian design, I would like to acknowledge the authors of the principles I would like to outline: the original nations of the Napo and Amazon rivers: the Kichwa Napo Runa, Siona, Cofán, Emberá, Witoto, Bora, Ticuna, Yagua, and other groups, whose material culture populates the rivers. These principles have been adapted, complemented, and expanded by other groups of migrants to Amazonia, as the *ribeirinho* floating houses vividly demonstrate. Ultimately, I hope to contribute towards an understanding of the complex and diverse mosaic of highly anthropogenic micro-ecologies that compound the Amazon cultural biome by focusing on local principles of inhabitation that far from contributing to destroy the jungle, enhance it and magnify both its diversity (biological, cultural, linguistic) and abundance. Design disciplines have to be considered under a different light in Amazonia. The realm of architecture must broaden beyond its traditional confines: in the jungle, the house is the forest. To be an architect in Amazonia is –above all– to be a forest builder, a designer of habitats or microecologies. As archaeologist Clark Erickson convincingly argues, from the perspective of historical ecology,

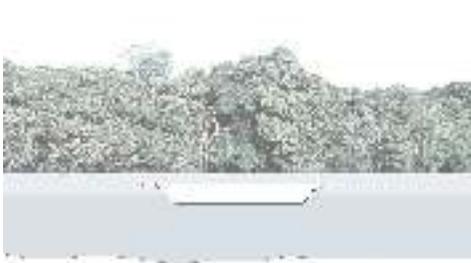
Amazonia is a monumental work of art. A monumental forest speaks eloquently about the sophisticated bio and geoengineering achieved by its peoples.

WATER BUILDS – FLOATING DESIGN EPISTEME

The exhibition Brazil Builds was presented at the MOMA, in New York, between January 13 and February 28 of the year 1943. The catalogue *Brazil builds: architecture new and old, 1652-1942*, edited by Philip L. Goodwin, accompanied the exhibition. Almost three fourths of Amazonia are currently under Brazilian jurisdiction. Four Amazonian projects were included in this exhibition: the Opera House in Manaus (late 19th Century), the Church of Santo Alexandre (early 18th Century), the College of Nazareth (1789), and the Theatro da Paz (1878) in Belém do Pará. All projects are European transplants into the architectural ecology of Amazonia. As a counter-narrative, Water Builds proposes to discuss the principles that have stemmed from cultures enmeshed with the logic of water pulses and flows, soil confabulations, atmospheric and reflective light, forested entanglements, and sublimely managed fire, the very essence of culture, the energy ignited by culture in a land dominated by water.



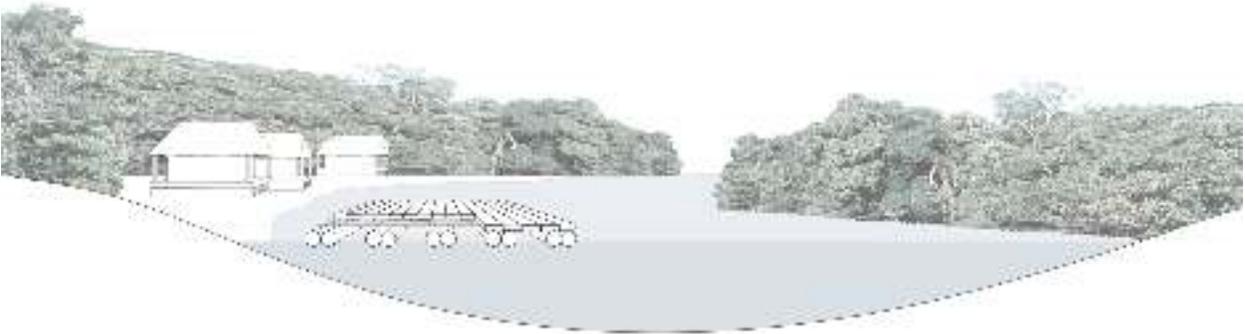
Floating grounds. Photograph by author. Drawing by author with Paula Calero.



Dugout canoes and floating homes. Photographs by author. Drawings by author and Paula Calero.

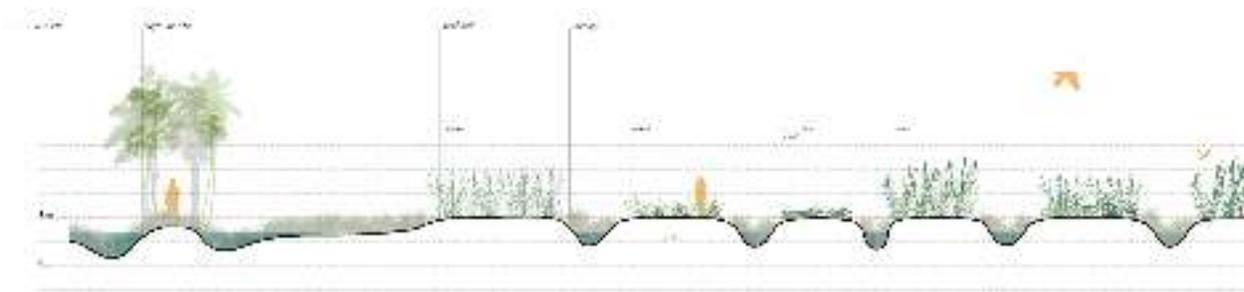


Elevated and floating *ribeirinho* (home)grounds. Photographs by Nicole Beattie and Katy Barkan.



Floating, resilient habitation. Millenary adaptation to water level changes and flooding. Drawings by author and Paula Calero.

EARTH BUILDS – TERREFORMING

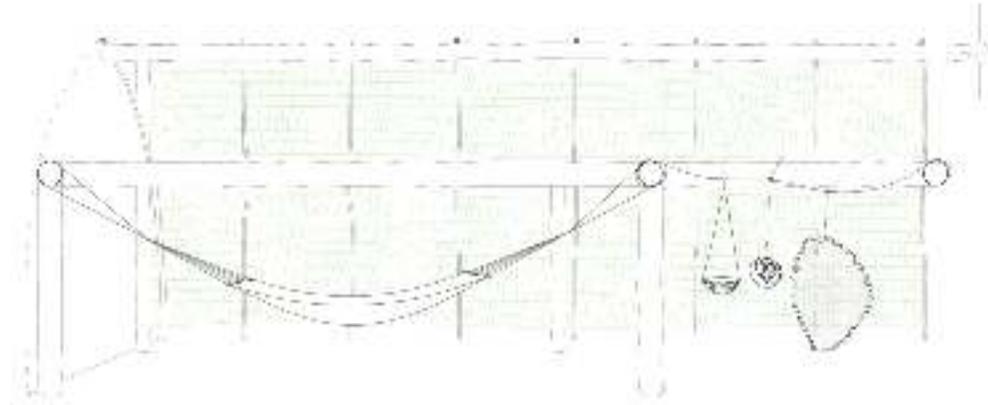


Water terraforming. Raised fields in the Baures, Beni Department, Bolivia. Photograph by author. Drawing by Abby Reed, YSoA.

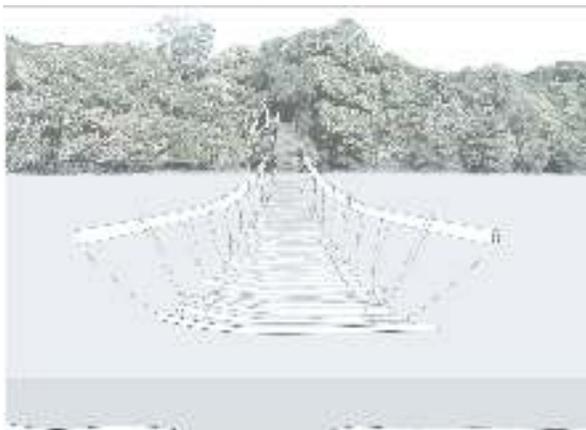
As the Andean glaciers melt and their waters tumble down into Amazonia, they move massive quantities of soil. Rivers swell with sediments to be deposited in the rich silts of the region's floodplains. Like the water, complex Amazonian societies have shifted massive volumes of soil to build mounds, raised fields, canals, forest islands, fish weirs, and other marvels of geoengineering (different versions of raised fields can be found in North, Central and South America). The monumental landscapes have been shaped, both literally and figuratively, from the ground up; through a system of autonomous yet interconnected chiefdoms and the incremental work of communities and generations. The cultural territories of Amazonia demonstrate that communities can build and manage large-scale complex, polycentric and highly autonomous (self-governed) systems which display low degrees of hierarchy and, rarely, the emergence of a state, let alone a dominant, expansive empire. The patterns imprinted upon the grounds of Amazonia speak of societies which achieved high degrees of justice: resources and power are well distributed. The terraforming also shows evidence of warfare: ditches thorned with venomous spears and covered with vegetation, moats, palisades and controlled access speak of hostilities among groups. Chiefdom constellations are veritable agro-ecological urbanisms of citizen-peasants; simultaneously open and closed, urban and rural. Current groups like the Yanomami or the Achuar display a social organization that is even more egalitarian than the chiefdom structures of the ancient regional-scale structures of inhabitation. Their decisions are always achieved through consensus and everyone participates in decision making. Participatory

democracy has been a common, millenary practice in the Americas. The Iroquois confederation system contributed to shape the structure of democracy in the U.S.

FOREST BUILDS – LIVING IN SUSPENSION



Tensile furnishings –the hammock- and hanging utensils. Drawing by author and Paula Calero.



Suspension bridge, suspended infrastructures. Drawing by author and Paula Calero.

In their vertical competition for light and life, plants and trees open their mouths, like *pirarucus* emerging to the surface of the canopy for a gulp of light. Others give up the fight and follow the pathways to occupy all shades, above and below ground, within the stratification of the canopy. From the vertical structure of these Amazonian cathedrals, hang the trapeze artists of the vines and the oriole nests; the long arms, legs and prehensile tails of monkeys throwing themselves into the abyss; while hammocks dangle from the vaulted or gabled structures of *malocas* below. Growing from the sky down, threads await the artful hands of the artist who transforms them into baskets, bags, hammocks, fish nets, textiles, architectures. *Shigras* hang from the foreheads of women who carry the fresh products of their *chakras* in the morning. They remain suspended from the walls while they cook. Hammocks hold the weight of children who smile through the filter of their patterns. The inner logic of many Amazonian homes is a tensile logic of suspension.

FIRE BUILDS – SMOKING LIFE INTO CULTURE



Amazonians smoke everything: they smoke their homes, their food, the soil, the *hojarasca* (biomass) that accumulates on the ground. They smoke their canoes and their architectures. They use *blue fire*, as Amazonianist Susanna Hecht calls it, for countless tasks. The forest is cultural because it is a forest of fire. Not the destructive fire unleashed by land speculation, deforestation, ranching, and agri-business expansion that ravaged the region in 2019. This is a fire of Life and Abundance. Smoking the biomass contributes to create biochars. The accumulation of organic matter over hundreds, thousands of years has also contributed to the composting of extremely rich *terra preta* and *terra mulata* (Indian black earths). Smoking the house keeps insects out and helps water proof its membranes. Smoking the food creates a sophisticated culinary art: depending on which wood you use to smoke the fish, the meat, or the vegetables; or which leaves you use to wrap the food, its flavor and aroma will be completely different.

Finale

The Shuar poet María Clara Sharupi Juárez gave me a copy of her book *Tarimiat*. Her poems, published in both Shuar and Spanish, were interspersed with black and white photographs. She had retrieved them from an anthropologist who had spent time in her community when she was six or seven years old. “The patterns of the baskets and the ceramics,” she told me while looking through the images, “like the black and red patterns imprinted on our skins, are the same ones that the Shuar weave into the skins of their houses: These patterns are meant to protect us, from real spears and darts, as much as from those shot by bad energy.” The ultimate skin is the sublime, artful, perfect skin of our planet: its thin, yet strong membrane of water, soil, air, and light interweaving all forms of Life. “A new era has already started according to our mythology” María Clara continues, “an era of Abundance.” It is hard to imagine, as we face the challenges of so-called “climate change” (a convenient euphemism that delivers those responsible from being held accountable) that an era of abundance has begun. It is possible, though, as hegemonic cultures are finally openly recognizing that there is profound and valuable knowledge in indigenous science, and that this knowledge is critical to the future of Life in the planet. Hegemony is learning how to survive from Autonomy. The marginal has become central. Amazonia is the future.